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ABSTRACT

This report compares two parent education groups with a control group on three measures of maternal knowledge and attitudes. The subjects were low income Black mothers with 18- to 24-month-old toddlers as of the beginning of the 2-year programs in 1974. The two programs were Levenstein's Toy Demonstration Program, in which mothers (N=26) observed demonstrators modeling playing with their children in the home, and a mothers' discussion program, in which the mothers (N=26) shared experiences of personhood, home and family life. There were 31 control group mothers. The three measures employed in interviews were (1) maternal individuation (expressions of sensitivity to the child's needs as a developing person and openness to alternative perspectives on controlling children's behavior), (2) ability to give developmental explanations of child behavior and (3) expressed perceptions of the mother's role as a teacher. Although significant differences among groups were found at the end of the first year, they were not found at the end of the second year. Findings are presented in three tables. (Author/BH)

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SYMPOSIUM: TOWARDS NEW CRITERIA FOR SUCCESSFUL INFANT INTERVENTION PROGRAMS--TARGETING PARENTS?

A DIMENSION OF THE FAMILY AS EDUCATOR: MOTHER AS TEACHER[1,2]

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INTRODUCTION

Schlossman's (1976) discussion of the history of parent education in America between 1897-1929 reminds us that the idea of parent education for childrearing is not new. We are reminded that, insofar as the National PTA became part of that history, it served to prepare and support families and children for schooling, and in the early years, it expected parents to assume broad, proactive stances toward policies and practices related to the nation's children. Finally, we note that child development specialists were continually interfacing with and influencing this history for they contributed theoretical premises, and often empirical data, in support of the various ideological positions assumed, many of which were concurrently translated into public policy statements.

Our best appraisal of the history of parent education is that, for a variety of reasons, it did not confront the dual issues of social and developmental diversity. These issues came to the forefront in the 60's and early 70's when federal tax dollars were, for the first time, expended on a massive scale to promote the psychological well-being of all of the nation's children. The new policies dictated close linkages between the psychological development of children and their readiness for traditional schooling. A variety of parent education programs were planned and evaluated, each of whose ultimate goal emphasized the child's eventual successful school performance.

Goodson and Hess (1976), for example, have reviewed twenty-eight such programs that had evaluation designs. They concluded that home-based, moderately structured parent programs produced the most striking short and long term gains for children, using only intelligence and achievement test performance as the criteria for effectiveness. The authors note that neither curriculum content per se, nor degree of specificity in tutoring the parent, typically the mother, were related to these gains. They also suggested that such programs may positively impact parental attitudes and parent-child interaction. Notably, some parents seemed to have a greater sense of control over their own lives and more flexible attitudes toward the child's development; these parents used a more elaborated language style, and were judged to be more involved and responsive in

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interactions with their children. Most of these criteria, however, were not employed in a single study; rather these results stem from the approaches of several different studies.

The research to be presented in this symposium addresses two conceptual problems associated with this prior history. The first is the problem of the definition of social and developmental diversity; the second is the problem of the definition of a developmentally-based intervention.

While it is clear, considering the first, for example, that education for childrearing is a long established aspect of American life, it is considerably less clear that the models of parent training developed have universal applicability across social and developmentally diverse groups. Even within a given social, ethnic, or racial group, we can expect subject-treatment interactions. We do not now have enough descriptive developmental data to posit what some of these "subject" variables might be. Furthermore, while successful school achievement is certainly important, what we really need more information about is how children actively construct and organize their physical and social realities, that is, how they learn. Most importantly, as we pursue this knowledge we need to know how our findings are strengthened or attenuated by consideration of social and developmental diversities.

As to the second problem, we do not often enough test what we as scientists think we know about developmental processes in real-world settings. This has lead to some confusion about what a developmentally-based educational intervention really is. In our view, it is one in which the best available information and resources from the scientific field of development are introduced for purposes of promoting individual psychological growth and development. No assumption need be made to the effect that, for example, parents lack the necessary behavioral repertoires to affect their children's development. This is an assumption associated with a therapeutic intervention. Rather, the notion of parent education implies that the repertoires are available, but that parental deployment of available personal resources often requires external support and heightened awareness of the linkages between their children's behaviors and their own. Parent training programs, and parent education programs should be, in our view, quite distinct on this point. If such programs have educational objectives for children, then it certainly is essential to employ multiple measures of effectiveness for we know that academic competence involves motivational, affective, and cognitive components.

The broad objective of this research project, therefore, was to study two developmentally-based educational intervention programs for mothers and their young children from the perspective of the social diversity of its participants. Specifically, what would be the relationship between the entry characteristics of participants, program implementation, and program outcomes?

The specific aims of the research were to:

1. experimentally replicate the findings of diverse parent education programs in a single study using cognitive performance outcomes as criteria;
2. conduct a simultaneous investigation of these programs in three diverse urban settings, each one of which was inhabited primarily by black lower income families;
3. examine the process whereby the interventions succeeded or failed using other multiple outcome criteria which are more reflective of an emphasis on individual development; and
4. attempt to identify some of the "subject" variables which influenced participation and outcomes.

PROGRAMS

The focus of the research evaluation stemmed from our continuing interest in the role of the family as educator to the child (Leichter, 1974). As Getzels (1974) has aptly stated: "All children acquire their fundamental 'codes for future learning' or 'learning sets' in the family during the period ascribed to socialization. One of these sets is the 'language code,' another the 'value code.' The language code gives the child the categories for structuring and communicating his experiences. The value code tells him what in his experiences is important...For one child, the codes learned in the family and those required by the school may be continuous; for another they may be discontinuous." (p.45) Since much of what and how young children learn may be experienced through informal observation and play with relatives, and the cultural and social contexts in which these transactions occur, it seemed important to observe the variations in individual development in a situation in which the normal informal teaching environment of the home, of necessity, accomodated to newer understandings of these learning processes.[4]

The research emphasized three conditions: (1) Levenstein's Toy Demonstration program, (2) Mothers Discussion group program, and (3) a Control group. The Discussion group was initially conceived by us to be a conservative control to the home-based Toy Demonstration program.

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[4] Few researchers have examined the direct effects of an attempt to experimentally influence the course of parent-child interactions over time. Perhaps the Parent Child Development Centers initially established by Dr. Mary Robinson of the Office of Child Development in three southern cities in the early 70's are the notable exceptions to this general rule. Our strategy, when we began in June, 1974, upon receipt of funds from the National Institute of Child Health and Human Development, was similar.

The Toy Demonstration program utilizes a female "Toy Demonstrator" who, in effect, each week models play with the mother's child in the mother's presence using preselected toys which presumably have high stimulus value for young children. Two half hour visits per week over a school calendar year are made with each dyad, the first for introduction of a new toy which the child is allowed to keep, and the second for review. Both mother and child are participants in this program, whose primary purposes are to enable the mother to observe the value of interactive play with an adult for a developing child, and how this 'play' can be stimulated, extended, and enriched. It is assumed that mothers will privately begin to initiate and/or sustain more of such experiences with the children in the Demonstrator's absence. Rationalized in terms of its long-range applicability to children's successful school achievement, this program has been depicted by Bronfenbrenner (1974) as one of the leading parent education programs.

In contrast, the Discussion group emphasizes the mother, not the child, as the primary initial participant. Specific toys are not considered as essential to the program. Rather, this program emphasizes mutual sharing of information and experiences of personhood, home and family life, of mothers of similar aged children. It is assumed that specific interest in those activities, such as play, which might enhance this development will develop secondarily, as a result of some of the mothers' own perceived personal needs being met through the group experience. At each housing site, two groups of ten mothers each were initially formed and maintained where possible. The groups met weekly for about two hours; on occasion this time was used for outside field trips and consultation.

The Control group received only the prescribed toys on a weekly basis, as developed in the Levenstein model.

PARTICIPANTS

Sample selection followed a similar format at each site. Nine target areas were identified according to degree of proximity to the base offices of United Charities, and the internal organizational character of building units in that site. About one-third of the participants in each of the three programs were recruited by representatives of each of the three conditions from their individual target areas. These target areas were randomly chosen. We had assurances from the Chicago Housing Authority that the buildings did not contain marked differences among residents.

Each mother of an 18-24 month old toddler by October, 1974 was offered the opportunity to participate in only one group. We believed that is would be less confusing to families, and less threatening, if we randomized by recruitment target area, rather than by participant.

Initially, there were 41, 53, and 38 participants in the Toy Demonstration, Discussion, and Control groups respectively, for a total N=132. Attrition occurred during and at the end of the first program year, rarely in the second year. Of 49 attrited participants, 26 left in 8/75 following the conclusion of year one; 13 of the 26 were Discussion group participants. The total number of attrited cases for the Toy Demonstration, Discussion, and Control groups were, respectively, 15, 27, and 5 (=39.7 per cent).[5] The final base sample is 83, 26 in the Toy Demonstration group, 26 in the Discussion group, and 31 in the Control group.

In this symposium, when empirical results are reported, only participants for whom we have complete data for any instrument or procedure are included. Tables one and two, however, present demographic data on all the participants who continued throughout the two year study.

We found no differences in initial mean Cattell I.Q. scores of the attrited children, by comparison to those in the main study sample. There was also no significant differential attrition by sex of child.

Tables one and two present important background data on our three groups. In this paper, we will specifically discuss only one "subject" variable: family structure, as defined by Billingsley's (1968) categories and presented at the top of Table two.

Approximately 31 per cent of the program group families would be considered a simple nuclear family in which husband, wife, and their offspring were present. This pattern characterized only 6.5 per cent of the control families. Sixty to 51.6 per cent of the Discussion group and control families were considered attenuated nuclear families in which only the mother and her children were present in the home, by comparison to 34.6 per cent of Toy Demonstration families. Only two families conformed to a pattern where husband, wife, their children, and other relatives were present, the simple extended family. However, 41.9 per cent of control and

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[5] Our complete report contains a breakdown of the participants' reasons for attrition by group. Discussion group participants reported plans to return to school or having found a job. Others reported a variety of reasons, which ranged from personal and family problems to an initial misunderstanding of program goals. Some, for example, thought the programs offered day care. Our research report (Slaughter, 1978) discusses the issue of attrition and its impact upon this study in some detail. Generally, the impact appeared negligible.

30.8 per cent of Toy Demonstration families, in contrast to four per cent of Discussion group families, conformed to the attenuated extended family. The total sample (N=82 queried on family structure) is characterized by 40 (48.7%) attenuated nuclear families, 22 (26.8%) attenuated extended families, 18 (21.(%) simple nuclear families and 2 (2.4%) simple extended families.

Control mothers tended to be younger, to be more often part of attenuated extended families, to report less contact with the child's natural father, and fewer adult males in the household. A large number of attrited Toy Demonstration participants, seven of eight known family structures were from attenuated nuclear families.

These data suggest that both initial responsivity to recruitment, as well as continued participation in programs may have been partially governed by this "subject" variable. It is quite possible that the social networks of participants' families interacted with specific groups to produce the observed outcomes. When, however, we covaried family structure with our three groups, using maternal interview measures as dependent variables, in every instance the covariate was nonsignificant. Specifically, once participants from households with varying family structures entered groups, except for maximizing the likelihood of continuance in one or the other group, family structure per se, appears not to have directly influenced outcomes. Clearly, however, this is an example of a "subject" variable which had considerable influence on who was affected.

PERFORMANCE TEST RESULTS

Black female psychometricians evaluated the children, in the presence of their mothers in a specially contructed room in each housing site three different times during this study.

The initial testing ended three months after the October, 1974 onset of the study when the average age of the children in all three groups was 22 months (SD=±2). The second testing, allowing for at least seven months passage for each child, ended twelve months into the programs as children averaged 32 months (SD=±2). The third testing concluded at the end of the programs when children averaged 41 months (SD=±2). Complete data across the three time points were available for 57 children.

By the end of the study, both program groups were significantly different from controls on the McCarthy Scales of Mental Abilities ($p < .05$). More importantly, while controls observed the normative pattern of similar socioeconomic, racial groups on this instrument, both program groups performed, on the average, such that they were equivalent or superior to white and black middle class children on this instrument (Kaufman and Kaufman, 1973, 1975a, 1975b). Examination of the McCarthy subscales indicated that the Verbal subscale--supposedly a measure of expressive language--accounted for much of

the differences between program and control children.

However, there were some surprises. Notably, all children, when initially evaluated under optimal conditions (familiar setting, same race examiner, etc.) obtained very high baselines on the first testing such that a significant linear decline could be observed between 22 and 41 months for the three groups. Figure one portrays this change. Discussion group children show a slight upward trend by the third testing, while Toy Demonstration and control group children each declined 10 and 13 I.Q. points. Note that our data on the Cattell at times 1 and 2 parallel the developmental norms extablished by Golden and Birns (1967) for a comparable aged group of black infants from similar social backgrounds.

INDEXING PARENTAL FLEXIBILITY: MATERNAL INDIVIDUATION

The symposium addresses other outcome criteria more consistent with our model of a developmentally-based educational intervention than indices of children's cognitive test performances. At least one of these is a variable we created in earlier studies which is measured from maternal interview data: maternal individuation.

Our earlier research suggested that mothers who were: (1) sensitive to the child's needs as a developing person, (2) warm and accepting of the child, and (3) open to alternative perspectives as far as controlling the child's behaviors, had higher achieving children upon entry into the preschool setting. Maternal individuation as defined in this research included the first and third criteria noted above; it correlated .44 ($N=90$, $p<.01$) in a multiple r with children's Binet scores (Slaughter, 1969). Factor analysis of these and other variables, however, indicated that the second variable, warmth and acceptance which had been independently measured, loaded first on the first factor with the other two variables. In the present study, the three scales were combined, using the best indicators from each one to establish a new seven point Maternal Individuation rating scale.

Two new variables: developmental explanations for child behaviors, and perception of teacher role, both five point scales, were created for this study. The measures were applied to interview data collected by black female interviewers in mothers' homes at the end of the first and the second years of the study. Developmental explanations focused upon how mothers explained typical child behaviors (eg. why children play), and Perception of teacher emphasizes the extent to which they took the child's viewpoint in a presented situation which required maternal teaching. Intercoder reliability estimates (percent agreement, $N=10$) were: MI=82.8; DE=80.0; TR=92.5. Sixty-six complete time 1 and time 2 interviews were available.

We predicted that program groups would differ significantly and

positively from controls on maternal individuation, developmental explanations for children's behaviors, and perceptions of maternal role as teacher.

In view of the numbers of variables introduced into these analyses, each of which has an obvious interdependence, we subjected all repeated time 1 and 2 maternal variables, including these three, to multivariate repeated analyses of variance and to analyses of covariance. On the repeated measures analysis, no significant results by group, time, or group x time were obtained for developmental explanations or perception of teacher role. For maternal individuation, we obtained a main effect for condition (group), and for time, but there was no group x time interaction. The multivariate F's for condition and time were, respectively, 1.863 ($p=.047$), and 4.172 ($p=.002$). The F for condition x time was 1.655 ($p=.087$). Further analyses confirmed that at the end of the first year, program groups, particularly the Discussion group, were significantly different from controls. By the end of the second year, controls had gained and the distinction was not maintained.

Our findings indicate that if program mothers are specifically asked to explain observable childhood phenomena such as how and why their children have changed from one age to another, whether young children of different ages ought to be treated differently and why, or why children play so much, they are little better than control mothers at offering explanations acceptable to child development enthusiasts. Controls are distinctly no worse than program groups at acknowledging the child's viewpoint. However, program groups, especially the Discussion group, are superior to controls on maternal individuation at the end of the first program year. They are more likely to report (1) satisfaction with the child's efforts at independence, (2) keeping a regular schedule for the child, (3) planning to teach the child about race, (4) using primarily verbal, rather than physical, controls to handle instances of disobedience or challenges to authority, (5) emphasizing that the child must possess guidelines or standards for coping in the adult world, (6) that warmth, friendliness, and consideration for others are important qualities for the child to develop, and (7) describing the child in primarily positive, or at least neutral, terms. Such reporting is in contrast to mothers who (1) primarily expressed satisfaction or dissatisfaction with the child in accordance with how the child met their own needs, (2) did not report any special caregiving schedule,(3) did not plan to later teach the child about the child's racial background, (4) used mainly physical controls in instances of disobedience, (5) emphasized obedience as a strategy for getting along in the world, (6) did not especially mention warmth, consideration, etc., as qualities for the child to develop, and (7) often described the child in negative terms, even when the intent was to praise the child.

The two extreme portraits were rarely observed in the data, but they do suggest quite different approaches to childrearing. In the former, the mother reports expending effort to individualize the child; the child is not merely an extension of herself, but a person apart whom she rears respectfully. Accordingly, her behavior appears flexible and adaptive to the emergent qualities and experiences of the child. In the latter, the mother appears far less flexible. Emphasis is on obedience, constraints, and proper behavior as expected by herself, and presumably, other family members. In our view, these are two different options for childrearing; though our programs emphasized the former, it should be recognized that the latter may be more universal across a variety of cultures and social groups.

Other analyses of covariance confirmed the above findings-no differences between program and control groups at time two. We think that by time two controls had benefitted from participation in the evaluation; the performance on this measure indicates that they looked, at time two, most like program groups at time one. We do not think that Discussion group participants were self-selected; those who attrited after the first year had significantly lower scores on maternal individuation than those who stayed, suggesting that the view of childrearing which was being promoted was not compatible with their own, even after one year in programs. This apparent shift in attitude, or compatibility of attitude, was the only variable which distinguished Discussion group participants from participants in other groups at the conclusion of year one. Table four indicates that there are no group X site interactions; the finding extends across program location, whether low or high-rise housing project, central to, or some distance from, the city.

It may well be that observed changes in children and in parent-child interaction are contingent upon prior changes in how the parent reports approaching the socialization of the child.

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TABLE 1

COMPARATIVE SOCIAL BACKGROUND DATA ON MOTHERS AND CHILDREN BY PROGRAM GROUP (PERCENTAGES)*

Variable	Program Group: Toy Demonstration (n = 26-25)	Mothers Discussion (n = 26-22)	Controls (n = 29-31)
1. No Current Work Experience	92.0	100.0	96.8
2. No Past Work Experience prior to Child's Birth	20.0	40.0	43.3
3. Previous Full-Time Work Experience	36.0	37.5	24.1
4. Primary Family Income=AFDC	88.5	96.0	93.3
5. No Secondary Income Reported	80.8	96.0	83.3
6. Maternal Health Perceived Below Average	24.0	18.2	20.0
7. Never Apart from Child More Than One Week	65.4	69.6	73.3
8. Contact with Child's Natural Father is Maintained	80.8	58.3	32.3
9. No Adult Males in Household (over age 17)	26.9	48.0	38.7
10. Only One Adult Female in Household (over age 17)	50.0	64.0	35.5

*The average ages of mothers at the time of maternal interviews (7/1/75) were, repectively 24.8±8 (Toy Demonstration), 26.9±9 (Discussion group), and 23.7±6 (Controls).

The average years of maternal education were, respectively 11.0±2 (Toy Demonstration), 10.6±1 (Discussion group), and 10.5±2 (Controls).

TABLE 2

COMPARISONS OF FAMILY STRUCTURE BY PROGRAM GROUP (PERCENTAGES)

	Toy Demonstration		Mothers Discussion		Controls	
	%	N	%	N	%	N
Simple Nuclear Family	30.8	8	32.0	8	6.5	2
Attenuated Nuclear Family	34.6	9	60.0	15	51.6	16
Simple Extended Family	3.8	1	4.0	1	0.0	0
Attenuated Extended Family	30.8	8	4.0	1	41.9	13
	100.0	26	100.0	25	100.0	31

MATERNAL PERCEPTION OF RELATION OF MOST SIGNIFICANT MALE TO CHILD AND HIS RESIDENCE BY PROGRAM GROUP (PERCENTAGES)

	Toy Demonstration		Mothers Discussion		Controls	
	%	N	%	N	%	N
Father, Lives with Child	34.7	9	37.5	9	6.6	2
Father, Does Not Live with Child	38.5	10	25.0	6	25.8	8
Not Father, Does Not Live with Child	7.7	2	20.8	5	35.5	11
Not Father, Lives with Child	3.8	1	4.2	1	16.0	5
No Information	15.3	4	12.5	3	16.0	5
	100.0	26	100.0	24	100.0	31

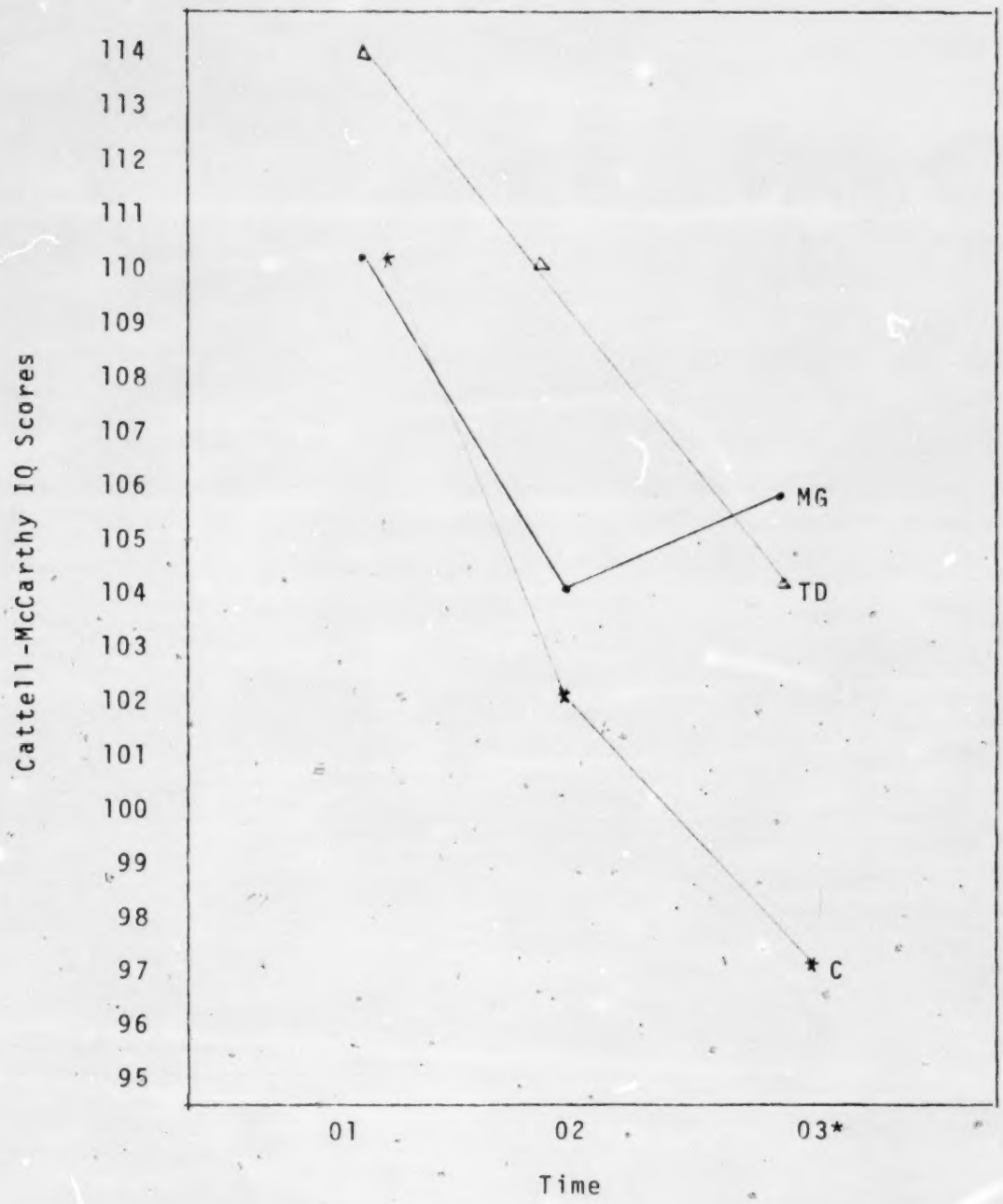
TABLE 3

EFFECTS OF PROGRAM GROUP AND HOUSING SITE
ON MATERNAL INDIVIDUATION 01

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig
Main Effects	28.178	4	7.045	5.909	0.00
Group	17.915	2	8.958	7.514	0.00
Site	6.361	2	3.180	2.668	0.08
2-Way Interactions	4.877	4	1.219	1.023	0.40
Group Site	4.877	4	1.219	1.023	0.40
Explained	33.056	8	4.132	3.466	0.003
Residual	64.373	54	1.192		
Total	97.428	62	1.571		

FIGURE 1

PROFILE OF AVERAGE INFANT TEST SCORES
(CATTELL-McCARTHY) BY PROGRAM GROUP



TD=Toy Demonstration
MG=Mothers Discussion Group
C=Control Group
* McCarthy Test